

Kingtronics®**FS1A THRU FS1M****SURFACE MOUNT FAST RECOVERY RECTIFIER****REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.0 Ampere****FEATURES**

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

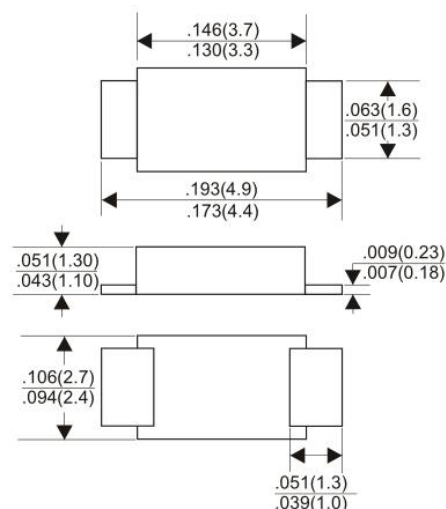
- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg / 0.00095oz

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load derate current by 20%

SMAF

Dimensions in inches and (millimeters)

PARAMETER	SYMBOL	FS1A	FS1B	FS1D	FS1G	FS1J	FS1K	FS1M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum Average Forward Rectified Current At $T_C=125^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							Amps
Maximum instantaneous forward voltage per at 1.0A	V_F	1.3							VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage	$T_A=25^\circ\text{C}$	5.0							uA
	$T_A=125^\circ\text{C}$	50							
Maximum Reverse Recovery Time Test conditions $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	15							pF
Typical Thermal Resistance	$R_{\theta JA}$	80							$^\circ\text{C/W}$
Operating Junction Temperature	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Rang	T_{STG}	-55 to +150							$^\circ\text{C}$

1- Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $2.0 \times 2.0''$ ($5.0 \times 5.0\text{cm}$) copper pad areas.

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

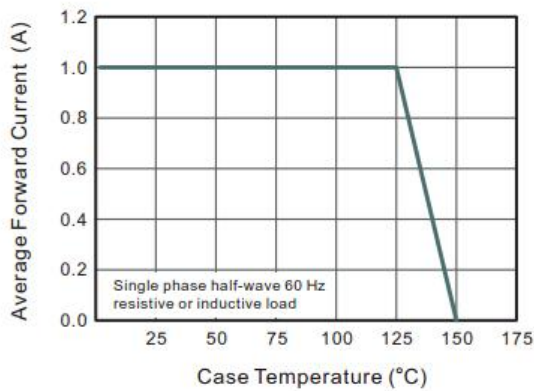


Fig.2 Typical Reverse Characteristics

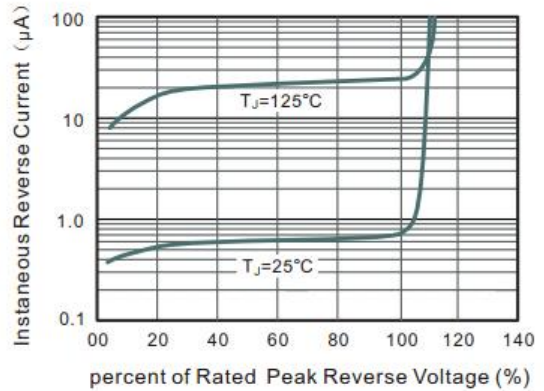


Fig.3 Typical Instantaneous Forward Characteristics

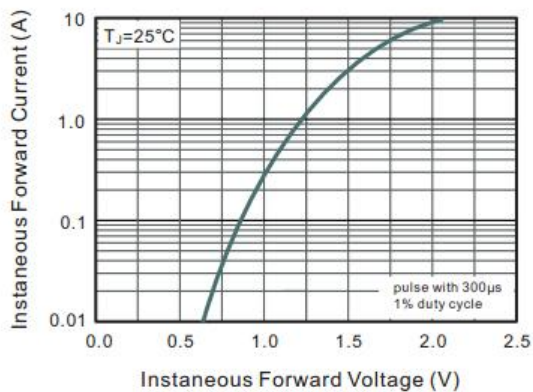


Fig.4 Typical Junction Capacitance

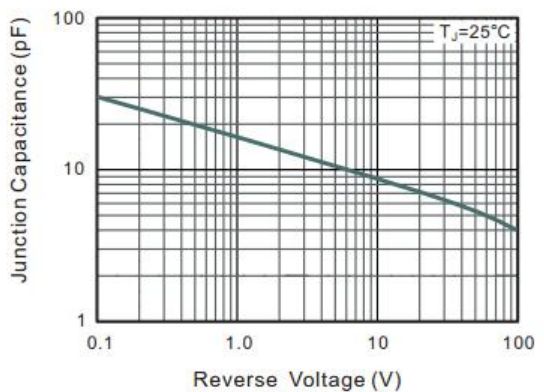
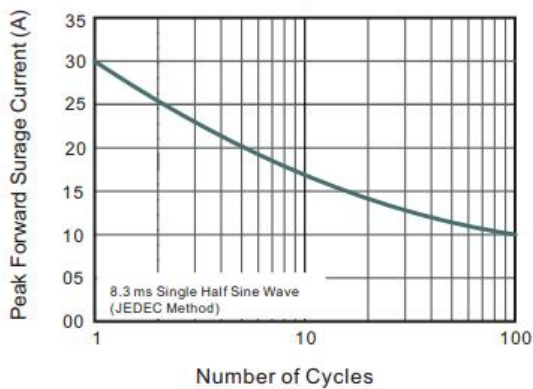


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Note: Specifications are subject to change without notice.